

## Economy and Jobs

***What investments in new facility and system assets can help support the state’s economic vitality and strengthen the job picture?***

Transportation’s link to economic development is vital. Roadways, airports, ferries, transit, water ports, and railways are all necessary for a strong economy, providing access to businesses, jobs, and world markets, as well as moving freight and commerce.

- Economic benefits of transportation investment fall into four categories:
- Basic user benefits (mainly reduced operating and production costs, reduced passenger and freight delay and reduced accidents)
  - Jobs from project construction and the multiplier effect\*
  - Economic productivity increases that help expand the state economy
  - Development for local or regional economies (through improved land access and support for tourism)

*“The most important competitive investment the state of Washington can make is to improve its transportation infrastructure. Washington’s currently overwhelmed transportation system threatens jobs and economic vitality, wastes people’s time and money, diminishes quality of life, and degrades our environment.” – Washington Competitiveness Council Report*

This folio examines the structure of the state’s economy, what research says about quantifying the benefits of transportation infrastructure investments and the role of the transportation system in supporting the economy. The discussion in this folio is closely related to the folios about Moving Freight and Bottlenecks and Chokepoints.

\*The multiplier effect is a measure of the economic consequences of the change in one sector of the economy upon the other sectors of the economy. It incorporates the direct effects (project construction jobs) plus those supported through project purchases of goods and services (indirect jobs) plus the effects to the rest of the economy due to household spending (induced jobs).

### Aviation

Washington’s system of 129 airports, generated 171,311 jobs, over \$4 billion in wages, and over \$18.5 billion in annual sales output.

### The Tourism Cluster

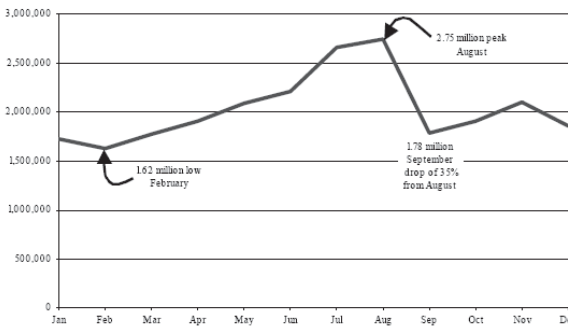
Transportation has a clear and inseparable link to the tourism cluster by providing several statewide services and programs including: infrastructure such as highways, airports, ferries, passenger rail, safety rest areas, viewpoints. Traveler information services include highway signing for destinations and businesses, roadside interpretation, traveler information, traffic cameras, interactive communications, and publications.

### The Ferry System

The Washington State Ferries is a component that links central Puget Sound with the Olympic Peninsula. The ferry system is a tourist attraction with a ridership of 2.75 million in August 2003. In 1980, total ferry ridership was 16.7 million; in 2002 it increased 50 percent to 25.1 million. These volumes are projected to continue to increase to 43.4 million by 2020.

### Total Monthly Ridership

All Ferries, all routes 2003



### Scenic Byways

Washington’s scenic byways are destinations for tourists. In the 2002 findings by the USDA Forest Service’s National Survey on Recreation and Environment reports that 56 percent of Americans participate in driving for pleasure in rural or natural areas. In 2002, travelers in Washington spent \$11.2 billion generating \$3.5 billion in earnings and providing 139,200 jobs. In 2003 this increased to \$3.9 billion.

### Emerging Directions

- Transportation infrastructure is a necessary factor for economic development, but not sufficient to ensure economic development. Other factors are important and may overshadow transportation investment.
- The Transportation Commission defines economic-development as: economic activities that result in development or retention of income-generating industries (those industries that raise per capita income). Transportation policy should continue to focus transportation projects on supporting “sure bets” rather than speculative development and should be aimed at supporting generative industries, not development that just redistributes personal income from one locality to another (such as retail).
- Targeted transportation economic development projects should focus on retaining existing jobs or probable new jobs to help ensure success.
- WSDOT should continue to work closely with the Washington State Department of Community, Trade and Economic Development and the State Economic Development Commission to evaluate the transportation needs of industry clusters and to support the overall state economic development direction as the Statewide Economic Vitality Plan is updated.

***The Washington State Transportation Commission and the Washington State Department of Transportation are in the process of updating the Washington Transportation Plan. This long range plan is based on data analysis and is focused on ten issues: System Preservation, System Efficiencies, Safety, Transportation Access, Bottlenecks and Chokepoints, Economy and Jobs, Moving Freight, Future Visions, Health and Environment and Funding and Governance. This plan will shape future transportation budget proposals.***

For more on this topic: [www.wsdot.wa.gov/planning/wtp](http://www.wsdot.wa.gov/planning/wtp)

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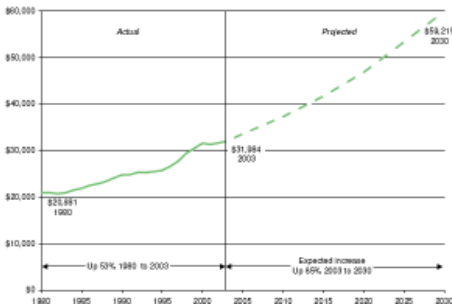
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## Washington's Economic Structure

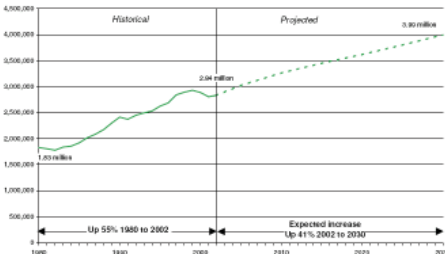
Per capita income is a real indicator of the state's economic growth. In Washington per capita income was \$31,984 in 2003, which ranked 14<sup>th</sup> nationally. Over the long run, growth in per capita income in Washington has trended closely with, and usually above, the national average.

### Washington Per Capita Income (in 2000 dollars)



Along with population, Washington's workforce is also growing and will continue to grow.

### Growth in Employment 1980 to 2030



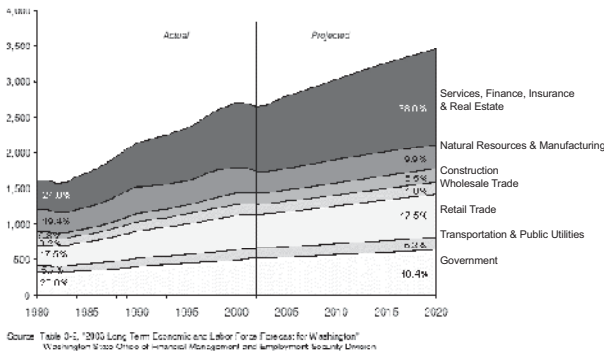
In March 2004 the state's unemployment rate of 7.6 percent was higher than the national rate of 5.7 percent (reflecting the severity of the recession on Washington's economy).

Most economic sectors are expected to see steady growth in the next 20 years, but the structure of Washington's economy is shifting. Following a national trend, services are expected to increase to almost 40 percent of non-agricultural employment by 2020, up from 25 percent in 1980. Most other sectors are projected to keep near their historical shares.

While remaining relatively steady in the number of jobs, manufacturing employment is expected to drop from 19.4 percent to 9.9 percent of all non-agricultural employment between 1980 and 2020. Even with this drop in share, Washington out-performs the nation in manufacturing.

In 2003, Washington manufacturers grossed \$88.3 billion, 21.3 percent of the total state gross business income. This sector employed more than 285,000 workers in 2002 (11 percent of Washington's jobs). Employment in the manufacturing sector has been down since 1998 mainly due to a downturn in the aerospace industry, though Washington is expected to see an average growth rate of 0.4% in manufacturing employment through 2030.

### Washington Non-Agricultural Employment by Industry, in thousands of jobs 1980 to 2020.



### Agriculture

Agriculture is big business in Washington, even though it only employs about 3 percent of our workforce. In 2002, Washington produced \$5.6 billion in food and agricultural products, ranking ninth nationally as the number one producer of 11 crops.

Agriculture employed more than 87,000 people in Washington in 2002. Eighty percent of all agricultural employment is located in Eastern Washington. Yakima County accounts for 24 percent of statewide agricultural employment.

### Quantifying the Economic Benefit of Transportation Investments

Research shows that transportation is linked to the economic health of a locality, state or region. Transportation infrastructure is a necessary but not sufficient factor for economic development. Transportation investments alone cannot prescribe the duration or magnitude of a specific economic improvement. Other factors are important and may overshadow the transportation investment. Transportation benefits are grouped into the following four categories.

#### Basic User Benefits

Improving safety, reducing delay, and lowering operating and production costs are examples of basic user benefits from making a transportation infrastructure investment. These are experienced directly by travelers and businesses.

#### Jobs, Project Construction, and the Multiplier Effect

The workforce that designs and builds transportation projects sees a direct benefit as additional funding for transportation projects is secured. Economists also show that there is an indirect benefit, or multiplier effect. Transportation infrastructure investment supports high paying jobs in the professional and construction sectors of the economy as well as additional jobs in the sectors that support transportation construction through the purchase of goods and services. Wages paid to this workforce translate into jobs in other trade and service sectors through household expenditures.

### Statewide Economic Productivity Increases

Transportation investments have linked producers to new markets leading to statewide productivity increases and economic growth and expansion. Continued investment has contributed to improved business efficiency through new practices such as just-in-time delivery.

Research by Nadiri and Mamuneas establishes the link between the highway network and economic performance. Their work provides empirical analysis about the historical contributions of roads to the U.S. economy. From 1950 to 1991, U.S. industries realized annual production cost savings averaging 18 cents for each dollar invested in the road system. This analysis captured the significant benefit that building the interstate system provided for economic growth and productivity. Decreased investment since the building of the interstate system has slowed transportation's contribution to productivity increases, but highway investment has remained a contributor to economic productivity growth.

### Local and Regional Economic Development

Most importantly, transportation provides access and opportunities for local or regional economies to compete in larger areas of state, national, or world markets. Producers have greater opportunities to capitalize on their natural assets whether it be labor force, tourism, or other competitive advantages. Transportation access is necessary for the expansion of home-grown industries and the attraction of new industries.

### Washington's Economic Clusters

In 2001 a study by the Washington Department of Community, Trade and Economic Development summarized the state's economic clusters. The study's intent was to encourage others to think about economic vitality issues in the framework of the clusters. An economic cluster consists of a lead or final product industry and suppliers, often concentrated in a particular region of the state. The state's economic vitality plan calls for supporting the needs of these industry clusters.

### Washington's Top Three Economic Clusters

Ranked by Gross Business Income	
Aerospace	2000 \$37.81 billion
Health Care	\$13.2 billion
Tourism	\$10.2 billion
Ranked by Employment	
Tourism	2000 261,625
Health Care	216,618
Aerospace	88,079

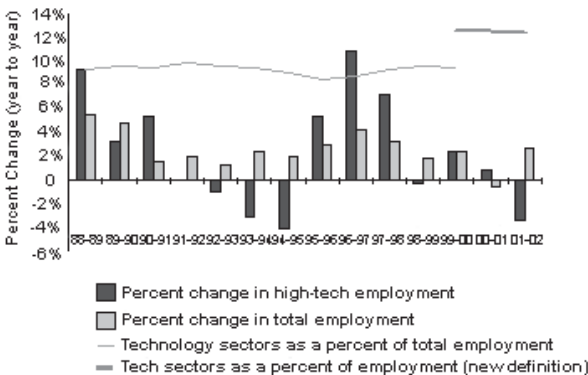
### Aerospace and Technology

Regionally, an interesting shift occurred in technology job growth. Established technology-rich communities like Seattle, Vancouver and Spokane saw a drop in technology jobs over the last two years. While Bellingham, the Tri-Cities, and Bremerton all exhibited strong technology job growth over the past two years.

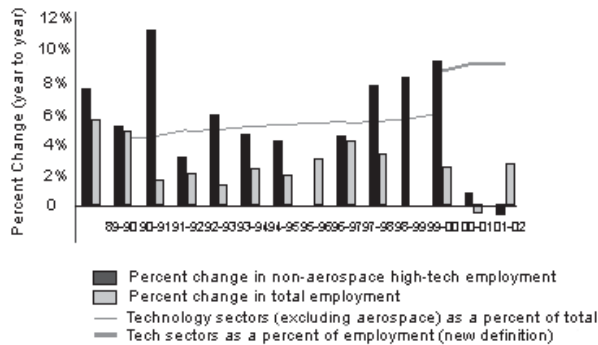
Technology industries account directly for more than 12 percent of Washington's total employment. Washington retains a highly educated workforce, critical to the technology industry, ranking twelfth for states with residents who have higher education degrees.

Since 1988, total high-tech employment fluctuated with the economic cycles of the aerospace industry, while non-aerospace high-tech employment showed steady growth during that same period.

### Technology industries account directly for more than 12 percent of Washington's total employment



### Technology industries, excluding aerospace, account directly for almost nine percent of Washington's total employment



### High Tech Employment by Technology Sector

